

CLAIMS

Please amend claims 1, 3, 4, 5, 6, 8, 20, 24, 32, and 34, and cancel claims 7, 10-13, 15, 16, 18, 19, 21, 25-31 and 35-37 as shown below.

1. (Currently amended) A composition comprising a synthetic oligonucleotide consisting of about 25 to about 40 nucleotides that hybridizes specifically to a *pagA* target sequence contained in a *B. anthracis* *pagA* target sequence selected from the group consisting of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or a sequence that is sequences fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA equivalents equivalent of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, and a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA sequences sequences that is fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, the sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, wherein at least one oligonucleotide is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8.

2. (Canceled)

3. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence contained in SEQ ID NO:21 consists of SEQ ID NO:1 or SEQ ID NO:2.

4. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence contained in SEQ ID NO:22 consists of SEQ ID NO:3 or SEQ ID NO:4.

5. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence contained in SEQ ID NO:23 consists of SEQ ID NO:5 or SEQ ID

NO:6.

6. (Currently amended) The composition of claim 1, wherein the synthetic oligonucleotide that hybridizes specifically to the *pagA* target sequence ~~contained in SEQ ID NO:24~~ consists of SEQ ID NO:7 or SEQ ID NO:8.

7. (Canceled)

8. (Withdrawn - Currently amended) The composition of claim 1 further comprising a *capB*-specific synthetic 7 ~~wherein the~~ oligonucleotide that hybridizes specifically to a ~~the~~ *capB* target sequence, wherein the *capB*-specific oligonucleotide consists of SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13 or SEQ ID NO:14.

9.-13. (Canceled)

14. (Previously presented) The composition of claim 1, wherein the synthetic oligonucleotide has a DNA or RNA backbone, or mixed DNA and RNA backbone, or contains at least one 2'-methoxy RNA group linking the bases.

15.-16. (Canceled)

17. (Previously presented) The composition of claim 1, wherein the synthetic oligonucleotide has a signal-producing label linked directly or indirectly to the oligonucleotide.

18.-19. (Canceled)

20. (Withdrawn - Currently amended) A method of detecting *B. anthracis* nucleic acid in a sample comprising the steps of:

providing a sample containing *B. anthracis* nucleic acids;

providing a pagA-specific at least one probe that hybridizes specifically to a pagA target sequence contained in a pXO1 plasmid, wherein the pagA-specific probe that hybridizes specifically to the pagA target sequence is a synthetic oligonucleotide of about 25 to about 40 nucleotides that hybridizes specifically to a sequence selected from the group contained in the pagA target sequence consisting of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or a sequence that is sequences fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA equivalents equivalent of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, and a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA sequences sequence that is fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24; a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, wherein at least one oligonucleotide that hybridizes to the pagA target sequence is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8;

hybridizing specifically to at least one pagA-specific probe to the pagA target sequence; and

detecting the presence of at least one pagA-specific probe hybridized to the pagA target sequence to indicate the presence of *B. anthracis* in the sample.

21.-23. (Canceled)

24. (Withdrawn - Currently amended) The method of claim 20 further comprising a 21, wherein the at least one capB-specific probe specific for a capB target sequence is a synthetic oligonucleotide consisting of SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, or SEQ ID NO:14.

25.-31. (Canceled)

32. (Currently amended) A kit comprising at least one a synthetic oligonucleotide consisting of about 25 to about 40 nucleotides that hybridizes specifically to a sequence contained in a B.anthraxis pagA target sequence selected from the group consisting of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, SEQ

~~ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or a sequence that is sequences fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA equivalents equivalent of SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, and a sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, or RNA sequences sequence that is fully complementary to SEQ ID Nos. 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 24, the sequence consisting of SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, or SEQ ID NO:24, wherein the at least one synthetic oligonucleotide is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8:~~

33. (Canceled)

34. (Currently amended) The kit of claim 32, further comprising a *capB*-specific probe ~~at least one synthetic oligonucleotide consisting of SEQ ID NO: 9, 10, 11, 12, 13 or 14, that hybridizes specifically to a *capB* target sequence of *B. anthracis*:~~

35.-37. (Canceled)